

# CENTRAL MACHINERY

®

## ROAD SWEEPER WITH 7.5 HP ENGINE

### Model 96456

### SET UP AND OPERATING INSTRUCTIONS



Diagrams within this manual may not be drawn proportionally.

Due to continuing improvements, actual product may differ slightly from the product described herein.

**Distributed exclusively by Harbor Freight Tools®.**

3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: <http://www.harborfreight.com>



**Read this material before using this product.  
Failure to do so can result in serious injury.  
SAVE THIS MANUAL.**

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**For technical questions or replacement parts, please call 1-800-444-3353.**

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## SAVE THIS MANUAL

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Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

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## IMPORTANT SAFETY INFORMATION

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In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### **DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

### **WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### **CAUTION**

**CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### **NOTICE**

**NOTICE** is used to address practices not related to personal injury.

### **CAUTION**

**CAUTION**, without the safety alert symbol, is used to address practices not related to personal injury.

## GENERAL SAFETY RULES




### **WARNING! Read all instructions**

**Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.** The term “power tool” in all of the warnings listed below refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.


### SAVE THESE INSTRUCTIONS


1. **Work area safety**
  - a. Keep work area clean and well lit. *Cluttered or dark areas invite accidents.*
  - b. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. *Power tools create sparks which may ignite the dust or fumes.*
  - c. **Keep children and bystanders away while operating a power tool.** *Distractions can cause you to lose control.*
2. **Personal safety**
  - a. Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. *A moment of inattention while operating power tools may result in serious personal injury.*
  - b. **Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.**
  - c. Remove any adjusting key or wrench before turning the power tool on. *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*
  - d. Do not overreach. Keep proper footing and balance at all times. *This enables better control of the power tool in unexpected situations.*
  - e. Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. *Loose clothes, jewellery or long hair can be caught in moving parts.*


## SPECIFIC SAFETY RULES

1. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
2. Avoid unintentional starting. Prepare to begin work before turning on the tool.
3.  **WARNING Fire Hazard.** Do not fill gas tank when engine is running or hot. Do not operate engine near spilled gasoline. Clean spilled

gasoline before starting engine. Do not store or handle gasoline near pilot light, electrical equipment or open flame. Do not smoke near gasoline.

4.  **WARNING Carbon Monoxide Hazard.** Operate this road sweeper in a well ventilated area only. Carbon Monoxide is created when engine is running and is a DEADLY gas when inhaled. Carbon Monoxide is a colorless, odorless gas. Early signs of Carbon Monoxide poisoning resemble flu symptoms such as headache, dizziness or nausea. If you notice these signs, turn off engine and immediately go to a well ventilated area.

5.  **WARNING Burn Hazard.** The engine becomes hot during operation. Do not touch the engine until it has cooled down after use.

6. **Always shut off the road sweeper, and allow the engine to cool before performing any maintenance on this tool.**
7. **Never operate the road sweeper without the Drive Belt Housing (89) in place and in good condition.** Never reach into the Belt Guard or allow any object to enter the belt guard when the road sweeper is operating.
8. **The road sweeper and engine are a source of ignition when they are running, and after operation until they have cooled off.** Never spray or spill flammables in the area of this tool. Flammables such as spray paint, solvents, gasoline, etc. may ignite or explode if sprayed or spilled near or on this road sweeper or engine.
9. **Gasoline fuel and fumes are highly flammable and explosive.** Always use extreme care and proper handling and storage techniques with these materials. Always have an appropriate fire extinguisher available when working with gasoline and other flammables.
10. **If gasoline or oil are spilled, they must be properly cleaned up immediately.** Use an approved absorbent material and dispose of in accord with local regulations. Gasoline and oil spills are a fire hazard as well as a slip and fall hazard.
11. **Never operate the road sweeper if there are leaks in the fuel system.** If a leak is observed, shut off the road sweeper, allow it to cool, and repair the leak before restarting.
12. **Never store fuel or other flammables near the road sweeper while it is in operation, or is still hot from operation.**
13.  **This road sweeper and engine will create loud and prolonged noise when in operation.** Do not remain near the road sweeper when it is in

operation without appropriate hearing protection. Always wear ANSI approved hearing protection equipment when working near this road sweeper.

14. This product is not a toy. Keep it out of reach of children.
15. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
  - Avoid operating alone.
  - Do not use with power switch locked on.
  - Properly maintain and inspect to avoid electrical shock.
  - Any power cord must be properly grounded. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.
16. Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
  - Lead from lead-based paints
  - Crystalline silica from bricks and cement or other masonry products
  - Arsenic and chromium from chemically treated lumberYour risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. (California Health & Safety Code § 25249.5, *et seq.*)
17. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



**SAVE THESE INSTRUCTIONS.**

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## SPECIFICATIONS

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Gasoline Engine	7.5 HP Briggs & Stratton Intek/Snow Engine 5BSXS.2051HF
Engine Approvals	2006 EPA Phase II; 2006 CA Emissions Regulations
Engine Fuel Type	Unleaded Standard Gasoline, Carburetor system
Engine Ignition	Electronic Ignition, Pull Start
Engine Fuel Tank	1 Gallon Capacity with shut-off valve
Brushes	2 Brushes mounted side by side.
Brushes Dimensions	15" Overall Diameter 25" Wide Overall
Tool Structure	Gasoline powered Rotary Sweeper mounted on Steel Cart
Drive Wheels	Pneumatic 10" x 3.50 Maximum Pressure 30 PSI
Tire Type and Capacity	Tractor Tread 300 LBS. Capacity @ 30 PSI
Front Caster Wheels	2 Front Swivel Casters with Rigid Black Rubber Wheels
Drive Type	¾" Belt Drive
Net Weight	127.8 Lbs.

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## UNPACKING

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When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

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## SET UP INSTRUCTIONS

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Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.



**WARNING** Risk of accidental starting; resulting in serious personal injury. Turn the Power Switch of the tool to its "OFF" position and unplug the tool from its electrical outlet before assembling or making any adjustments to the tool.

**Note:** For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

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## OPERATING INSTRUCTIONS

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Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

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## **ASSEMBLY**

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Your road sweeper is shipped assembled, except for adjustment of the handle and initial service of tires and engine.

### **Check the Wheels**

1. Check the Wheels for proper function and adjust if needed.
2. Check the Wheel air pressure, and fill to no more than 30 PSI cold.

### **Adjusting the Handle**

1. Loosen the Handle Screw Knobs (74) to loosen the Upper Handle (76).
2. Pull the Upper Handle (76) upward into position. Tighten Handle Screw Knobs (74) securely.
3. Recheck all bolts and fasteners periodically before work to ensure the assembly remains secure and safe.

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## **MANDATORY MAINTENANCE BEFORE FIRST USE**

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**WARNING:** The road sweeper is shipped without oil in engine, and without gasoline in the engine fuel tank. You must add oil and fuel before first use of this tool. Serious damage to the tool will result if it is not properly serviced before first use.

### **Initial Engine Service**

For complete engine operating instructions, see the engine manufacturer's owners manual shipped with this product.

1. **CAUTION: To prevent accidental starting, remove the spark plug wire before working on the engine.**
2. **CAUTION: The engine is shipped without oil or gasoline.** You must fill engine oil reservoir before starting the engine for the first time. Operating the engine without oil will result in almost immediate severe damage to the engine.
3. To add or check oil level (engine must always be OFF), unscrew Oil Dipstick which is attached to the cap of the Oil Fill Port. Oil level on dipstick should be between the ADD and FULL marks. If oil level is unclear, wipe dipstick with a clean rag, insert dipstick into opening and turn screw cap until finger tight. Unscrew cap and remove dipstick and read oil level.
4. Prior to first use, unscrew Oil Fill Port and add approximately 3/4 quart SAE 30 weight non-detergent motor oil into opening. Use a suitable clean funnel to prevent oil spills.

5. Recheck oil level and add more oil if needed. DO NOT OVERFILL. Overfilling the oil reservoir can cause excess pressure causing damage to the engine.
6. Fill the gasoline tank with regular grade unleaded gasoline. Do not add oil or use leaded gasoline. Fuel cap must be tightly in place prior to starting the engine.

### **Starting the Engine**

For complete engine operating instructions, see the engine manufacturer's owners manual shipped with this product.

1. Position the Road Sweeper on a level surface. Before starting the engine, check the oil level. Unscrew the oil dipstick, pull it out, wipe it off, then re-insert into the engine. Screw it into place, then unscrew it, remove it and read the oil level. If the level is low, add standard 30 weight or multi-grade motor oil until the reading is in the range indicated on the dipstick. DO NOT OVERFILL, as this will cause excessive pressure in the oil reservoir and can cause engine damage.
2. Before starting, check to see that there is gasoline in the fuel tank. If the fuel level is low, fill before starting with fresh, clean standard unleaded gasoline. Do not add oil to the gasoline. FIRE HAZARD: Do not add gasoline to the engine after it has been running and is hot. Allow the engine to cool before adding gasoline.
3. Open the fuel valve by rotating the Fuel Valve Lever to the right.
4. Close the manual choke all the way by rotating the Choke Lever to the left.
5. Press the Primer Bulb 8 times to prime the carburetor.
6. Pull the starting cord 3 or 4 times to introduce gasoline vapor into the cylinder.
7. Move the manual choke to its 1/2 closed position.
8. Pull the starting cord again. The engine should start with the first or second pull.
9. Once the engine is started, let it warm up. As it warms, gradually open the choke until it is fully open. You may then begin to use the road sweeper.
10. If the engine does not start or run properly following these procedures, check the troubleshooting section in this owners manual.

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## **OPERATION**

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1. This road sweeper is designed for sweeping dust, dirt, leaves and snow from driveways, walkways and paved areas. This Owner's Manual assumes that the operator has an understanding of the use of road sweepers and gasoline engines.
2. Only use on firm, level surfaces. Use on steeply inclined surfaces may cause the operator to lose control of the sweeper. Use on loose or gravel surfaces may



cause rocks or debris to be thrown possibly causing personal injury or property damage.

3. Before starting the engine, read the operator's manual provided by the engine manufacturer. Observe all safety instructions and recommended practices contained in that manual.
4. To begin operation, start the engine. Once the Engine is started, allow a few minutes for the engine to warm up.
5. The levers on the Handle are used to operate the machine. The Lever on the Left side starts and stops the rotation of the brush. Press the lever down onto the handle to start the brush. Release the lever to stop the brush. The levers on the Right side control the power drive to the rear wheels. Press the Upper Lever down onto the Handle to cause the machine to move forward. Pull the Lower Lever up to the Handle to cause the machine to move backward. Prior to changing travel direction allow the Road Sweeper to come to a complete stop.
6. The Control Levers are "Deadman" type. They must be held down onto the Handle to operate. Whenever a Lever is released, its operation will stop. In an emergency, you can release the levers to stop the machine and stop the brush.
7. When ready to sweep, press the Left Lever to the Handle to start the Brush rotating. With the Brush rotating, press either the upper or lower lever on the right side to cause the machine to move forward or back.
8. The angle of the Brush may be adjusted up to 20 degrees either way to brush debris to the side. With the machine stopped, lift up the Steering Arm (99), rotate the Brush as desired, then lower the Steering Arm to lock the Brush in place.

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## **MAINTENANCE**

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1. Keep the road sweeper clean and dry. Store the road sweeper in a secure location out of reach of children and unauthorized persons. Protect the road sweeper from incidental damage while in storage or during transport.
2. Before each use, check all parts of the road sweeper for proper function and to locate any damage or leaks. Repair any damage or leaks before operating the road sweeper.
3. Before each use, check the oil level in the engine. Add oil if required. If oil leaks are detected, or the engine is using excessive oil, contact a qualified service technician.
4. If oil in engine appears dirty, drain and replace with fresh oil.
5. Periodically check the Drive Belts (62,63). Be sure they are tight and in good condition. Replace a belt if it is cracked or damaged. Check the Belt Drive

Housing (89) before each use. Be sure it is in good condition, and is firmly installed on the road sweeper.

6. Have a qualified service technician periodically service the Gasoline Engine (68).
7. Over time the Brush will wear down and may not contact the pavement. To adjust Brush height, remove the Front Caster Wheels by pulling out the Retaining Pin (27). Remove 1 Plastic Ring from the lower part of the Caster Wheel Axle. Replace the Caster Wheel with the Plastic Ring on the top. Replace the Retaining Pin.

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## TROUBLESHOOTING - ENGINE

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Symptom	Possible Cause	Possible Remedy
Engine Will Not Start	Fuel Valve is OFF	Turn Valve to OPEN Position
	Fuel Tank is Empty	Fill Fuel Tank
	Choke in Open Position	Close Choke
	Spark Plug is Dirty	Clean and Gap Spark Plug
	Spark Plug Wire is Loose or Disconnected	Clean and Tighten Spark Plug Wire
	Technical Problem	Service by a Qualified Technician
Engine Runs Rough, Pings or Dies	Gasoline is Wrong Type	Drain Tank and Refill with 86 Octane or Higher Unleaded Gasoline
	Gasoline is dirty or has Water or Oil in it	Drain Tank and Replace with Clean Fresh Gasoline
	Fuel Level is Very Low	Fill Fuel Tank
Engine Shuts Off By Itself, But Has Fuel	Low Oil Level Shut Off	Check Oil Level, Add if Needed
	Loose or Damaged Spark Plug Wire	Check Spark Plug Wire, Replace if Needed
	Other Technical Problem	Service by a Qualified Technician
Engine Does Not Reach Full Speed	Choke Closed	Open Choke when Engine is Warm
	Gasoline is Contaminated	Drain Tank and Replace Fuel
	Air Filter is Clogged	Clean or Replace Air Filter
	Other Technical Problem	Service by a Qualified Technician

**PLEASE READ THE FOLLOWING CAREFULLY**

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

**PARTS LIST AND ASSEMBLY DIAGRAM**

<b>Part</b>	<b>Description</b>	<b>Q'ty</b>	<b>Part</b>	<b>Description</b>	<b>Q'ty</b>
1	End Cap	2	54	Screw m5 x 8	6
2	Brush Section	14	55	Flat Washer m6	5
3	Bushing	10	56	Bolt m10 x 30	1
4	Brush Axle	2	57	Lower Housing	1
5	Self-Locking Nut m8	23	58	Bolt m8 x 40	8
6	Gear Housing	2	59	Washer	4
7	Bushing	4	60	Screw m8 x 20	2
8	Brush Transmission Assembly	1	61	Engine Base	1
9	Flat Washer m8	34	62	Drive Belt 1	1
10	Bolt m6 x 65	4	63	Drive Belt 2	1
11	Nut m6	14	64	Bolt 5/16"	1
12	Bolt m6 x 12	12	65	Washer m8	11
13	Nut m8	4	66	Drive Pully	1
14	Bolt m8 x 45	6	67	Flat Key B5 x 40	1
15	Washer m10	4	68	Engine	1
16	Bolt m10 x 55	2	69	Throttle Control	1
17	Nut m10	3	70	Lower Handle	1
18	Bolt m10 x 25	2	71	Nut m8	4
19	Brush Support Caster	2	72	Handle Bracket	4
20	Caster Wheel Fork	2	73	Locking Bracket	4
21	Washer	22	74	Locking Knob	2
22	Brush Pivot Frame	1	75	Bolt m8 x 100	2
23	Plastic Bushing	6	76	Upper Handle	2
24	Upper Step Washer	1	77	Screw m6 x 40	2
25	Flat Washer m10	2	78	Clutch Handle	3
26	Bolt m10 x 30	1	79	Screw m6 x 60	1
27	Caster Wheel Retaining Pin	2	80	Bolt m6 x 60	1
28	Spring	2	81	Throttle Control	1

<b>Part</b>	<b>Description</b>	<b>Q'ty</b>
29	Bolt m10 x 20	2
30	Bolt m8 x 16	6
31	Spring Washer m8	17
32	Bolt m6 x 25	3
33	Nut m6	4
34	Bolt m6 x 16	8
35	Bracket	1
36	Round Pin m5 x 40	2
37	Universal Joint	1
38	Spindle Circlip	3
39	Bearing 6003	4
40	Bearing Housing	1
41	Drive Shaft	1
42	Flat Key A5 x 20	1
43	Bushing	1
44	Pulley	1
45	Step Washer	1
46	Bolt m8 x20	6
47	Spindle Circlip m19	2
48	Tire	2
49	Bolt m8 x 70	4
50	Drive Transmission	1
51	Cable Forward	1
52	Cable Reverse	1
53	Round Pin m8 x 45	2
54	Screw m5 x 8	6
55	Flat Washer m6	5

<b>Part</b>	<b>Description</b>	<b>Q'ty</b>
82	Spring II	1
83	Washer I	1
84	Bracket I	1
85	Bolt m8 x 25	6
86	Idle Pully	2
87	Bearing 6200	2
88	Bolt	1
89	Drive Belt Housing	1
90	Spring II	1
91	Bushing	1
92	Bracket II	1
93	Washer III	1
94	Bolt m8 x 30	1
95	Bolt m10 x 40	1
96	Drive Belt Housing Cover	1
97	Clutch Cable	1
98	Handle Grip	1
99	Steering Arm	1
100	Bolt m8 x 50	1
101	Bolt m8 x 35	2
102	Turn Bracket	2
103	Catch Bracket	1
104	Cover Tube	1
105	Bushing I	2
106	Plastic Plug	4
107	Sweeper Screen	1
108	Brush Cone 350 x 3"	1



**Record Product's Serial Number Here:** \_\_\_\_\_

**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

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## **LIMITED 90 DAY WARRANTY**

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Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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